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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/013,895	01/27/98	NI J	PF355

022195
HUMAN GENOME SCIENCES INC
9410 KEY WEST AVENUE
ROCKVILLE MD 20850

HM12/0623

EXAMINER
KAUFMAN, C

ART UNIT	PAPER NUMBER
1646	6

DATE MAILED: 06/23/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/013,895	NI ET AL.	
	Examiner	Art Unit	
	Claire M. Kaufman	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

1)☒ Responsive to communication(s) filed on *27 January 1998* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *17-19 and 21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claims *1-21* are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)☐ All b)☐ Some * c)☐ None of the CERTIFIED copies of the priority documents have been:

1.☐ received.

2.☐ received in Application No. (Series Code / Serial Number) _____ .

3.☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

14) ☒ Notice of References Cited (PTO-892)
15) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
16) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5* .
17) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
18) ☐ Notice of Informal Patent Application (PTO-152)
19) ☒ Other: *Notice to Comply* .

DETAILED ACTION

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1646.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-16 and 20, drawn to nucleic acid, vector, host cell and method of making the vector, host cell, and encoded polypeptide, classified in class 435, subclass 69.1.

II. Claims 17, 18 and 21, drawn to polypeptide, classified in class 530, subclass 350.

III. Claim 19, drawn to antibody, classified in class 530, subclass 388.22.

The inventions are distinct, each from the other because of the following reasons:

The nucleic acid of Invention I is related to the polypeptide of Invention II by virtue of encoding the same. The nucleic acid has utility for the recombinant production of the polypeptide in a host cell, as recited in claim 16. Although the nucleic acid and polypeptide are related since the nucleic acid encodes the specifically claimed polypeptide, they are distinct inventions because the polypeptide can be made by another and materially different process, such as by synthesis or purification from the natural source. Further, the nucleic acid may be used for processes other than the production of the polypeptide, such as nucleic acid hybridization assay for detection of related nucleic acids, and the host cell may be used for amplification of the nucleic acid.

The nucleic acid of Invention I is related to the antibody of Invention III by virtue of the nucleic acid encoding the polypeptide of Invention II, which is the cognate antigen of the antibody and necessary for production of the antibody. However, both the nucleic acid and encoded polypeptide of Inventions I and II, respectively, are distinct from the antibody of Invention III. The reasons for this is that although the polypeptide and antibody are related due to their necessary stearic complementarity, they are distinct inventions because the polypeptide

can be used for another and materially different process other than for production of the antibody, such as to assay or purify the natural ligand of the polypeptide (as the polypeptide is itself a receptor), or in assays for the identification of agonists or antagonists of the receptor polypeptide. Because the nucleic acid is structurally unrelated to the antibody, and the polypeptide it encodes is distinct from the antibody, so is the nucleic acid distinct from the antibody.

Because these inventions are distinct for the reasons given above, have acquired a separate status in the art as shown by their different classification and because of their recognized divergent subject matter, and the searches required for each invention are not coextensive, restriction for examination purposes as indicated is proper.

During a telephone conversation with Kenley Hoover for A. Anders Brookes on February 26, 1999 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-16 and 20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 17-19 and 21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

Figures 1, 2 and 4 of the instant application is presented on multiple separate panels. 37 C.F.R. § 1.84 (u)(1) states that partial views of a drawing which are intended to form one complete view, whether contained on one or several sheets, must be identified by the same number followed by a capital letter. For example, the sheets of drawing which are labeled "Figure 1" in the instant specification should be renumbered "Figures 1A and 1B". Applicant is reminded that once the drawings are changed to meet the separate numbering requirement of 37

C.F.R. § 1.84 (u)(1), Applicant is required to change the Brief Description of the Drawings and the rest of the specification accordingly. If, for example, Figure 1 is divided into Figures 1A and 1B, then the Brief Description and all references to this figure in the specification must refer to Figures 1A and/or 1B.

Sequences Presented in Drawing Figures

37 CFR 1.821(b) requires exclusive conformance, with regard to the manner in which the nucleotide and / or amino acid sequences are presented and described, with the sequence rules for all applications that include nucleotide and amino acid sequences that fall within the definitions. When a sequence is presented in a drawing, regardless of the format or the manner of presentation of that sequence in the drawing, the sequence must still be included in the Sequence Listing and the sequence identifier ("SEQ ID NO:X") must be used, either, in the drawing or in the Brief Description of the Drawings. (See MPEP 2422.02.) Figure 1 shows sequences of DR4 polynucleotide and polypeptide, and Figure 4 shows the sequence of DR polynucleotide. The sequences are not identified in the drawings or Brief Description on page 5, but the specification identifies them on page 6, lines 14 and 16, as SEQ ID NO:1 (polynucleotide) and 2 (amino acid). Either the figure or the Brief Description must reference these SEQ ID NOs.

Sequences

This application contains sequence disclosures that are encompassed by the definitions for nucleic and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth in the attached Notice to Comply with Requirements for Patent Applications Containing Nucleic Sequence and/or Amino Acid Sequence Disclosures. In the current application, SEQ ID NO:8-12 (p. 38, ¶2, p. 41, ¶3, and 42, ¶s 3-4) do not correspond to the sequences in the Sequence Listing, which lists only 11 sequences.

According to 37 CFR 1.821(d) (MPEP § 2422), where the description or claims of a patent application discuss a sequence listing that is set forth in the "Sequence Listing" in accordance with paragraph (c) of this section, reference must be made to the sequence by use of the assigned identifier, in the text of the description or claims, even if the sequence is also embedded in the text of the description or claims of the patent application. The sequences specified above must be referred to by a correct sequence identifier which is present in the Sequence Listing.

Appropriate correction is required.

Specification

Applicants are required to use the heading "Brief Description of the Drawings" instead of "Brief Description of the Figures" at page X. See MPEP 608.01(f)

The disclosure is objected to because of the following informalities:

Applicants are advised that the ATCC has moved from Rockville, MD to Manassas, VA, effective March 23, 1998. The correct address is now:

American Type Culture Collection
10801 University Boulevard
Manassas, VA 20110-2209

The specification should be amended to reflect the correct address for the ATCC. See for example page 6, lines 18-19.

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification (37 CFR 1.78). In the current application the specific reference is made after the Field of the Invention, but should be made before.

Claim Objections

Claim 5 is objected to because of the following informality: in line 3 of (f), "include" should be --includes--. Appropriate correction is required.

Claims 9-10 and dependent claim 11 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claims are objected to because they are drawn to (claim 9) a nucleic acid comprising a polynucleotide which hybridizes to a polynucleotide having a nucleotide sequence set forth in claim 1 or to (claim 10) a nucleic acid comprising a polynucleotide encoding an amino acid sequence of an epitope-bearing portion of a polypeptide set forth in claim 1, so these dependent claims can be infringed by something which would not infringe base claim 1.

Claim Rejections - 35 USC § 112, First Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 20 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a nucleic acid comprising a polynucleotide set forth in (a)-(k) or which encodes a DR4 polypeptide or portion thereof set forth in (a)-(j), does not reasonably provide enablement for a nucleic acid encoding a DR4 polypeptide or portion thereof set forth in (a)-(j) except for at least one conservative amino acid substitution or that is encoded by a nucleic acid complementary to a coding nucleic acid. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The factors considered when determining if the disclosure satisfies the enablement

requirement and whether any necessary experimentation is undue include, but are not limited to:1) nature of the invention, 2) state of the prior art, 3) relative skill of those in the art, 4) level of predictability in the art, 5) existence of working examples, 6) breadth of claims, 7) amount of direction or guidance by the inventor, and 8) quantity of experimentation needed to make or use the invention. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

Claim 20 is drawn to a polynucleotide encoding a polypeptide that has the sequence of SEQ ID NO:2 or a specified portion thereof, except for at least one conservative amino acid substitution, the claim encompasses a polypeptide in which none of the amino acids are the same as those of SEQ ID NO:2. Polypeptides are encoded by the "coding strand" of a nucleic acid, and the complement of the coding strand does not by definition encode. For this reasons, one could not make the nucleic acid encoding the amino acid sequence or a fragment thereof in (k) of claim 20. Also, there is no function of the polypeptide required by the claim. The specification does not provide guidance to allow the skilled artisan to determine how different—either structurally or functionally—a DR4 polypeptide can be from SEQ ID NO:2, while still considered a DR4 polypeptide. The specification states (p. 23, lines 37-38) that "some amino acids can be varied without significant effect on the structure or function of the protein." But it is noted that some areas, such as ligand binding region, are critical for activity. While the specification defines which substitutions are considered conservative (TABLE 1 of page 25) and one would reasonably expect that a limited number of amino acids could be substituted with conservative amino acids, one would not reasonably expect that a substitution of all amino acids of SEQ ID NO:2 or amino acids in a complete domain thereof would yield a protein having the function of the original protein, such as induction of apoptosis (p. 45, last paragraph). The specification has not disclosed which amino acids are critical for structure or activity, nor how many amino acids could be conservatively substituted while maintaining activity of the original protein. While assays used to determine which amino acids are essential for function are listed, this is an invitation to experiment. The full-length protein is over 450 amino acids long. Even being limited to conservative amino acid substitutions, there is an enormous number of polypeptides encompassed by the claim. The specification has shown only how to use a

polypeptide having the amino acid sequence of SEQ ID NO:2 (or that encoded by the cDNA of ATCC#97853) or specific domain thereof (e.g., extracellular domain, ECD, see Example 3). For these reasons, it would require undue experimentation to make the nucleic acid of claim 20 wherein the encoded polypeptide has an unlimited number of conservative amino acid substitutions compared to SEQ ID NO:2.

Claims 10 and 16 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of producing a polypeptide comprising the sequence of SEQ ID NO:2 or a fragment thereof which is epitope-bearing or which comprises the ECD, ICD (intracellular domain), TMD (transmembrane domain) or DD (death domain), does not reasonably provide enablement for a method of producing a polypeptide which has an amino acid sequence that is not SEQ ID NO:2 or a fragment thereof, including an amino acid sequence encode by a polynucleotide which is complementary to a polynucleotide encoding SEQ ID NO:2 or a fragment thereof. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The claims are drawn to a method of producing a polypeptide or to a nucleic acid encoding a polypeptide comprising SEQ ID NO:2 or a fragment, where the encoding nucleic acid is a complement of a coding sequence (claim 1(k) and 20(k)) or which is 95% identical or hybridizes under stringent conditions to a nucleic acid encoding a polypeptide of SEQ ID NO:2 or fragment thereof. Polypeptides are encoded by the "coding strand" of a nucleic acid, and the complement of the coding strand does not by definition encode. For this reasons, one could not make the nucleic acid encoding the amino acid sequence or a fragment thereof in (k) of claim 1. The specification teaches a DR4 polypeptide having the sequence of SEQ ID NO:2 and an encoding nucleic acid having the sequence of SEQ ID NO:1. There is no limiting definition of a DR4 polypeptide. It is disclosed that that polypeptide or fragments thereof may be used to produce antibodies and that the extracellular domain and complete polypeptide can influence apoptosis (Examples 5 and 6). However, a nucleic acid which is 95% identical to a nucleic acid

which encodes a polypeptide of SEQ ID NO:2 does not necessarily encode anything. According to the specification, such a nucleic acid can include insertions or deletions relative to the reference nucleic acid. This means that nucleic acids with frameshifts are possible so the encoded polypeptide is truncated or a "nonsense" amino acid sequence not related to SEQ ID NO:2. The specification has not taught how to use such polypeptides. Further, because SEQ ID NO:2 can be encoded by a great number of nucleic acids due to degeneracy of the genetic code, the encoding nucleic acid does not need to resemble the naturally occurring encoding nucleic acid of SEQ ID NO:1. This means that a nucleic acid which is 95% identical to or hybridizes to a degenerate nucleic acid would not be useful for isolating related naturally occurring nucleic acids nor would the encoded polypeptide necessarily be structurally similar to the polypeptide of SEQ ID NO:2 since 1/20 amino acids could differ. For these reasons, it would require undue experimentation to practice the invention as claimed.

Claims 1, 5-10, 12-16 and 20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention.

In addition to the enablement issues discussed above in this Office action, elements required for practicing a claimed invention must be known and readily available to the public or obtainable by a repeatable method set forth in the specification. When biological material is required to practice an invention, and if it is not so obtainable or available, the enablement requirements of 35 USC §112, first paragraph, may be satisfied by a deposit of the material. See 37 CFR 1.802.

The specification does not provide a repeatable method for obtaining ATCC Deposit No. 97853, and it does not appear to be a readily available material. For each deposit made pursuant to these regulations, the specification shall contain: (1) The accession number for the deposit; (2) The date of the deposit; (3) A description of the deposited biological material sufficient to

specifically identify it and to permit examination; and (4) The name and address of the depository. [See MPEP 2404-2410.02.]

The location and date of deposit of ATCC #97853 is disclosed on p. 6, lines 16-21; however, the deposit does not satisfy the enablement requirements. If a deposit is made under the terms of the Budapest Treaty, then an affidavit or declaration by Applicants or someone associated with the patent owner who is in a position to make such assurances, or a statement by an attorney of record over his or her signature, stating that the deposit has been made under the terms of the Budapest Treaty and that all restrictions imposed by the depositor on the availability to the public of the deposited material will be irrevocably removed upon the granting of a patent, would satisfy the deposit requirements. See 37 CFR 1.808.

If a deposit is not made under the terms of the Budapest Treaty, then an affidavit or Declaration by Applicants or someone associated with the patent owner who is in a position to make such assurances, or a statement by an attorney of record over his or her signature, stating that the deposit has been made at an acceptable depository and that the following criteria have been met:

(a) during the pendency of the application, access to the deposit will be afforded to one determined by the Commissioner to be entitled thereto;

(b) all restrictions imposed by the depositor on the availability to the public of the deposited material will be irrevocably removed upon the granting of a patent;

(c) the deposit will be maintained for a term of at least thirty (30) years and at least five (5) years after the most recent request for the furnishing of a sample of the deposited material;

(d) a viability statement in accordance with the provisions of 37 CFR 1.807; and

(e) the deposit will be replaced should it become necessary due to inviability, contamination or loss of capability to function in the manner described in the specification.

In addition the identifying information set forth in 37 CFR 1.809(d) should be added to the specification. See 37 CFR 1.803-1.809 for additional explanation of these requirements.

Claim Rejections - 35 USC § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 20 and dependent claims 2-4 and 6-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 20 are indefinite because they recite in (c) "the mature DR4 polypeptide (full-length polypeptide with the leader removed) having the amino acid sequence at position about 24 to about 468 in Figure 1 (SEQ ID NO:2)". First, the specification says on page 8, lines 27-36, that the mature DR4 encoded by the cDNA in ATCC #97853 may or may not differ from the predicted mature DR4 shown in Figure 1 (amino acids from about 24 to about 468). It is acknowledged that SEQ ID NO:2 may not be identical to the encoded DR4 amino acid sequence from ATCC #97853; however, SEQ ID NO:2 only has 468 amino acids. The specification presents no evidence that the protein is shorter than the 468 amino acids and there is no basis in the sequence listing for it being longer than 468. So, while the encoded DR4 of the ATCC #97853 does not have to end with amino acid 468, it appears that SEQ ID NO:2 does. Therefore, it is unclear what is meant by "to about 468". Further, there is nothing in the specification to suggest that the mature form of the polypeptide of SEQ ID NO:2 can be the same as the full-length form, even though the exact position of the start of the mature form may not be absolutely certain. Therefore, it is unclear if the parenthetical phrase is meant to indicate that there could be a mature form of SEQ ID NO:2 which is the same as the full-length. It is suggested that phrasing such as "a nucleotide sequence encoding the mature DR4 polypeptide having the amino acid sequence from about amino acid 24 to 468 of SEQ ID NO:2" would obviate this rejection.

Claims 1(c) and 3 (line 3) and 20(c), (g)-(j), are indefinite because it is unclear what "at positions..." and "in positions..." refers to. Since the claims refer to a portion of a polypeptide, it is confusing to refer to a fragment "at" or "in" positions amino acid X to X. This rejection

could be obviated by using a term such as "from" amino acid X to X, which is used in other claims such as claims 4 and 11.

Claim 20 is indefinite because it recites in line 3 "said polypeptide has a sequence selected from the group consisting of:", but the group is a group of nucleotide sequences not amino acid sequences.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 9 is rejected under 35 U.S.C. 102(a) as being anticipated by GenBank Accession No. W65310 (U).

GenBank Accession No. W65310 teaches a nucleic acid which is 100% identical over its entire length to nucleotides 1798-2133 of SEQ ID NO:1 (see "SEQUENCE COMPARIAON—A). Therefore, this nucleic acid would hybridize under stringent conditions to the nucleic acid encoding SEQ ID NO:2 (*i.e.*, a nucleic acid containing the sequence of SEQ ID NO:1).

Claims 9 and 10 are rejected under 35 U.S.C. 102(a) as being anticipated by Accession No. AA100865 (cited by Applicants) in light of Goodman (Basic & Clinical Immunology, 1994, V).

Accession No. AA100865 teaches a nucleic acid which is more than 93% identical over nucleotides 13-365 of SEQ ID NO:1 (see "SEQUENCE COMPARIAON—B). The nucleic acid of Accession No. AA100865 is 367 nucleotides long, so that about 91% of the nucleic acid of

Accession No. AA100865 shares high identify with the above portion of the SEQ ID NO:1. Therefore, this nucleic acid would hybridize under stringent conditions to the nucleic acid encoding SEQ ID NO:2.

Goodman teaches that epitopes on polypeptides are generally about 3-20 amino acids and may be on denature antigens, which would have linear epitopes (p. 52, col. 2, third paragraph, and p. 53, col. 2, first paragraph, and Figure 4-4). Since the nucleic acid of Accession No. AA100865 comprises spans of more than 49 contiguous nucleotides, which would encode at least 16 amino acids, one would reasonably expect, absent evidence to the contrary, the Accession No. AA100865 nucleic acid to encode an epitope-bearing portion comprised by the polypeptide having the sequence of SEQ ID NO:2 of the instant application. Note that the rejection is over Accession No. AA100865, and Goodman is cited only as evidence of epitope size and form.

Claims 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ruf et al. (Nucleic Acids Res., 1988, W) in light of Goodman (Basic & Clinical Immunology, 1994, V).

Ruf et al. teach a nucleic acid encoding a protein (Fig. 2) which is identical over a span of 6 contiguous amino acids to amino acids 425 to 450 of SEQ ID NO:2 of the instant application (see attached "SEQUENCE COMPARIAON—C).

Goodman teaches that epitopes on polypeptides are generally about 3-20 amino acids and may be to denatured antigens, which would have linear epitopes (p. 52, col. 2, third paragraph, and p. 53, col. 2, first paragraph, and Figure 4-4).

Therefore, 6 contiguous amino acids would reasonably be expected, absent evidence to the contrary, to function as an epitope. Then, the nucleic acid of Ruf et al. anticipates the claimed invention. Note that the rejection is over Ruf et al., and Goodman is cited only as evidence of epitope size and form.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chinnaiyan et al. (Science, Nov. 1996, X) describes DR3 and the encoding nucleic acid.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Claire M. Kaufman, whose telephone number is (703) 305-5791. Dr. Kaufman can generally be reached Monday through Friday from 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Hutzell, can be reached at (703) 308-4310.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Official papers filed by fax should be directed to (703) 308-4242. Faxed draft or informal communications with the examiner should be directed to (703) 308-0294. NOTE: If applicant *does* submit a paper by fax, the original signed copy should be retained by the applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office. **Please** advise the examiner at the telephone number above before facsimile transmission.

Claire M. Kaufman, Ph.D.

Patent Examiner, Art Unit 1646

June 18, 1999

Application No.: 0[redacted]13,895

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

☒ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.

☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).

☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).

☐ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."

☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).

☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).

☐ 7. Other: _____

Applicant Must Provide:

☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".

☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.

☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216
For CRF Submission Help, call (703) 308-4212
PatentIn Software Program Support (SIRA)
Technical Assistance.....703-287-6900
To Purchase PatentIn Software.....703-306-2600

PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE

Part of Paper 6

Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered, include copy of this form with next communication to the applicant.